General Description

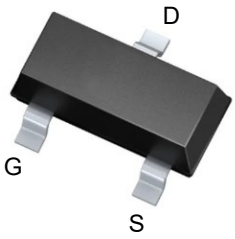
The MY5N06A use Trench Power MV MOSFET technology,have Excellent package for heat dissipation,use High density cell design for low $R_{DS(ON)}$

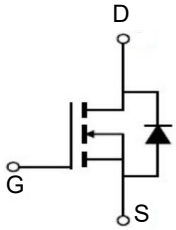
Features

V_{DSS}	60	V
I_D	5	A
$R_{DS(ON)}$(atV_{GS}=4.5V)	36	mΩ
$R_{DS(ON)}$(atV_{GS}=2.5V)	41	mΩ

Application

- DC-DC Converters
- Power management functions





Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MY5N06A	SOT23-3L	MY5N06A	3000

Absolute Maximum Ratings (T_C=25℃unless otherwise noted)

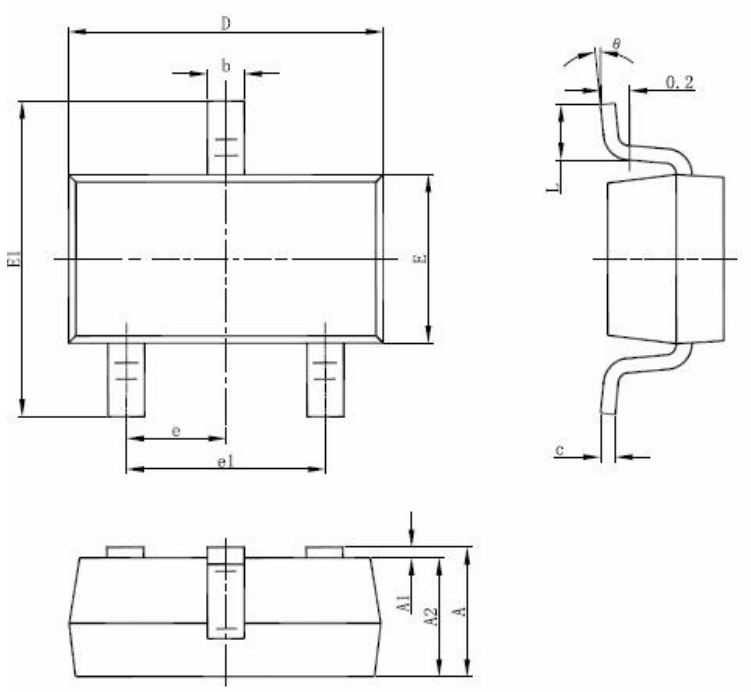
Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	60	V
Gate-source Voltage	V_{GS}	±20	V
Drain Current	I_D	5.0	A
Pulsed Drain Current [A]	I_{DM}	12	A
Total Power Dissipation @ T_C=25℃	P_D	1.2	W
Thermal Resistance Junction-to-Ambient [B]	$R_{\theta JA}$	105	℃/ W
Junction and Storage Temperature Range	T_J ,T_{STG}	-55～+150	℃

Electrical Characteristics at T_j=25 ℃ unless otherwise specified

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=250pA	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V,V_{GS}=0V,T_C=25℃			100	uA
Gate-Body Leakage Current	I_{GSS1}	V_{GS}= ±20V, V_{DS}=0V			±100	nA
	I_{GSS2}	V_{GS}= ±10V, V_{DS}=0V			±50	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS} , I_D=250pA	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}= 10V, I_D=3A		36	46	mΩ
		V_{GS}= 4.5V, I_D=2A		41	51	
Diode Forward Voltage	V_{SD}	I_S=5A,V_{GS}=0V			1.2	V
Maximum Body-Diode Continuous Current	I_S				2	A
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=30V,V_{GS}=0V,f=1MHZ		330		pF
Output Capacitance	C_{oss}			90		
Reverse Transfer Capacitance	C_{rss}			17		
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=10V,V_{DS}=30V,I_D=3.5A		5.1		nC
Gate Source Charge	Q_{gs}			1.3		
Gate Drain Charge	Q_{gd}			1.7		
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=10V,V_{DD}=30V, R_L=1Ω, R_{GEN}=3Ω		13		ns
Turn-on Rise Time	t_r			52		
Turn-off Delay Time	$t_{D(off)}$			19		
Turn-off Fall Time	t_f			12		

A. Pulse Test: Pulse Width≤300us,Duty cycle ≤2%.
B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

Package Mechanical Data-SOT-23-3L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°